

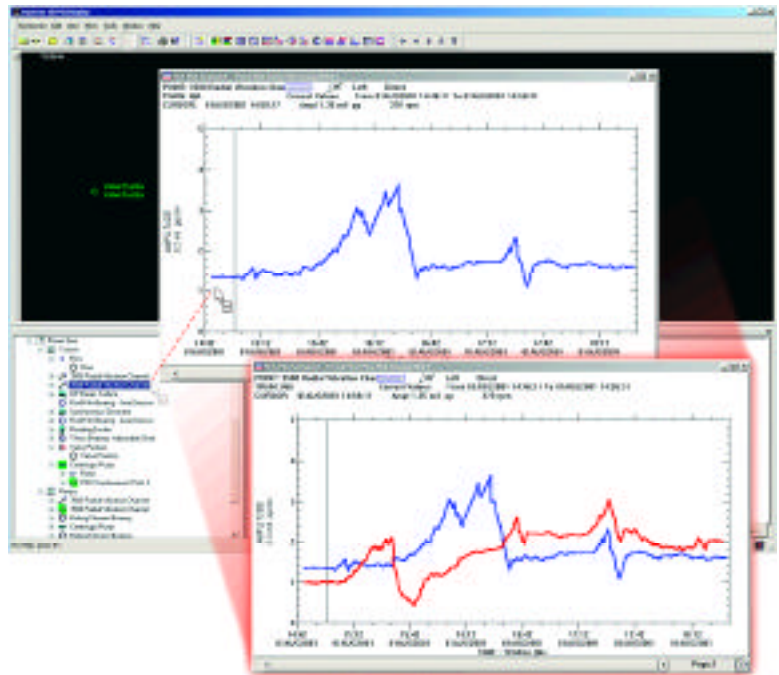
SYSTEM 1 – Unparalleled **TRENDiNG** Capabilities

Powerful new trending capabilities are one example of the many innovations in machinery / asset condition management brought to you by System1™.

The creation of advanced and more user-friendly trending capabilities in System 1 overcome the limitations common to many other trending packages on the market, and significantly improve upon the trending capabilities of our own software applications offered in the past.

System 1 version 2.0 provides trend data resolution better than four seconds between samples. This includes all measurements coming into System 1 from compatible hardware or via digital interfaces from process control and other systems. System 1 trends and stores not only static data, but also synchronously and asynchronously sampled dynamic waveform data in both time- and frequency-domain formats, allowing you to “play back” dynamic and static data from events such as alarms, startups, or specific dates/times, much as a flight recorder on an aircraft is used to capture *all* cockpit activity.

In addition, derived values created by the user using our automation interface to compatible spreadsheets, such as Microsoft® Excel, can also be trended, but generally at slower speeds (several times per minute). Any data manipulation functions (such as statistical, arithmetical, and logical) found in compatible spreadsheets can now be used on real-time and archived data within System 1. This ability to handle



Drag-and-drop capabilities make on-the-fly creation of multi-variable trend plots for correlating data easier than ever. Simply select the point(s) to add to an open trend plot, drag-and-drop the variable(s) into the plot, and the trend plot instantly updates with the new variable(s). Drag-and-Drop is just one of the many enhancements you'll find in System 1's powerful trending capabilities.

both direct and derived values results in a truly flexible trending package that can **customize data** to the requirement of individual applications and enterprises.

Plans also exist to increase trend resolution even further in future releases of System 1 to a remarkable one second for select communications processors and interface methods.

Storage Limitations and Mandatory Trend Compaction? **Gone!**

With System 1 the user specifies the amount of storage to reserve for the historical database. Have 30 GB at your disposal? You can now use all of it, in

any manner desired. This means that you can collect, store, and view high-resolution static and dynamic data without losing any of this data to compaction methods and without the constraints of fixed trend intervals. Choose a start and end date for your trend display, regardless of the interval, and be assured that all your data is there and available for viewing in one continuous trend – no more pasting together fixed interval trends to get what you want to see and no more lost data. If you prefer to compact the data, the criteria for data compression has now been made totally configurable through the use of user-definable “change filters” on every measurement. Bently Nevada’s change filtering capabilities improve upon those available in most other industrial trending packages by allowing you to specify not just “percent of change” criteria for storing data, but also max and min storage intervals, to ensure that too little (or too much) data is a thing of the past.

Drag-and-Drop Correlation

Using System 1’s drag-and-drop method of plot configuration, correlation of data has never been simpler. When viewing a plot, the user can simply select a point from the navigation tree, drag it over to the trend plot, and drop it. The point will automatically be configured and displayed on the selected plot along with any other variables already being viewed – add as many points as you want, from any location or asset, to a trend plot.

All the information without all the clutter

A number of display features have been included to speed data and information access as well as minimize plot clutter resulting from too much information being displayed at one time. Consider these important improvements introduced with System 1:

- *Plot headers can be removed to maximize the plot size.*
- *Selecting an individual trend line on a multi-variable plot causes engineering units specific to that point to appear on the right-hand scale.*
- *Time- and event-focused trend presentations allow the user to globally define the data to be displayed. For example, you can now specify not just an exact start/end date, but also real-time data, the last XX days, a specific startup/shutdown, or alarm event. All data meeting this criteria will then be displayed.*
- *Events such as alarms and journal entries can now be displayed on trend plots, where an icon represents each event type. When the mouse is passed over any of these icons, the particulars of the event are instantly displayed.*
- *Plot zooming of amplitude scale ranges and intervals (rubber band zooming) is included, greatly reducing the time spent by users drilling down to a specific interval of interest with an appropriate amplitude range.*
- *Whenever other data is available but not displayed, the user can simply scroll to that unseen data.*
- *Customization of the plot display gives users the ability to create plots specifically tailored to their requirements. For example, plots that are to be inserted into reports using third-party office automation tools such as word processors can be configured to accentuate details through user selection of colors for trend lines, backgrounds, and grids. This greatly improves clarity and accommodates individual preferences.*

Advanced trending is just one of the many impressive new features found in System 1 – combined, these features form the industry’s most powerful and capable tool for machinery / asset condition management. ORBIT